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Application No: 10595495 Version No: 2.0

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Total Errors: 0  
No. of SeqIDs Defined: 246  
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# SEQUENCE LISTING

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 Puttini, Stefania  
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 Girod, Pierre Alain  
 Bucher, Philipp  
 Nguyen, Duc-Quang  
 Calabrese, David

<120> HIGH EFFICIENCY GENE TRANSFER AND EXPRESSION IN MAMMALIAN CELLS  
 BY A MULTIPLE TRANSFECTION PROCEDURE OF MAR SEQUENCES

<130> 3024-119

<140> 10595495

<141> 2006-04-24

<150> PCT/EP2004/011974

<151> 2004-10-22

<150> EP04002722.9

<151> 2004-02-06

<150> US60/513,574

<151> 2003-10-24

<160> 246

<170> PatentIn version 3.5

<210> 1

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<212> DNA

<213> Homo sapiens

<220>

<221> misc\_binding

<222> (1)..(320)

<223> MAR of human chromosome 1, nt from 36686 to 37008

<220>

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<222> (1)..(320)

<223> MAR of human chromosome 1, genomic contig; 36686 to 37008

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atataataat attatattat atattatata ttatattata taatatataa taatattata 120

taattatata ttacattata taatatataa taatattata taattatata ttacattata 180

taatataata taatattata taataatata taattatata atatataata atattatata 240

atattatata atattatata atatataaat atataataat atatattata ttatataata 300

gtatataata ttatataata 320

<210> 2  
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<222> (1)..(709)  
<223> MAR of human chromosome 1, nt from 142276 to 142984

<220>  
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<222> (1)..(709)  
<223> MAR of human chromosome 1, genomic contig; 142276 to 142984

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ttatatataa tatattttgt attatatata ttacaatata ttttgtatta tataatatat 120

aatacaatat ataatatatt gtattatata ttatataata caatatatta tatattgtat 180

tatatattat atataaact atataatata ttgtattata tattatatat aatactatat 240

aatatatttt attatatatt atatataata caatatataa tatattgtat tataatacaa 300

tgtattataa tgtattatat tgtattatat attatatata atacaatata taataatata 360

ttataatata taataataat ataataaat aataatatat attgtattat atattatata 420

atacaatata taatatattg tattatatat attttattac atataatata taatacat 480

tataatatat tttgtattat atataatata ttttattatg tattatagat aatatatttt 540

attatatatt atatataata caatatataa tatattttgt attgtatata atatataata 600

caatatataa tatattgtat tatatataat attaatatat tttgtattat atatttatat 660

tttatattat aattatgttt tgcattatat atttcatatt atatatacc 709

<210> 3  
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<212> DNA  
<213> Homo sapiens

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<222> (1)..(409)  
<223> MAR of human chromosome 1, nt from 1368659 to 1369067

<220>  
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<222> (1)..(409)  
<223> MAR of human chromosome 1, genomic contig; 1368659 to 1369067

<400> 3  
tacacataaa tacatatgca tatatattat gtatatatac ataaatacat atgcatatac 60  
  
attatgtata tatacataaa tacatatgca tatacattat gtatatatac ataaatacat 120  
  
atgcatatac attatgtata tatacataaa tacatatgca tatacattat gtatatatac 180  
  
ataaatacat atgcatatac attatgtata tatacataaa tacatatgca tatacattat 240  
  
gtatatatac ataaatacat atgcatatat tatatacata aattatatta tatacataat 300  
  
acatatatac atattatgtg tatatatata taaatacata tacatatatt atgtgtatat 360  
  
atacatgata catatacata tattatgtat atatatacat aaatacata 409

<210> 4  
<211> 394  
<212> DNA  
<213> Homo sapiens

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<222> (1)..(394)  
<223> MAR of human chromosome 1, genomic contig; 2839089 to 2839482

<400> 4  
tatgtatata tacacacata tgtatatata cacacatatg tatatacgta tatatgtata 60  
  
tatacacaca tatgtatata cgtatatatg tatatatata cacatatgta tatacgata 120  
  
tatgtatata tacacacata tgtatatatg tatatatgta tatatacaca catatgtata 180  
  
tatgtatata tacacacata tgtatatatg tatatatgta tatatacaca catgtgtata 240  
  
tatatatata catatgtata tatgtatata tacacacata tgtatatatg tgtatgtata 300  
  
tatacacaca tatgtatata tacacatata tatgtatata tacacacata cttatatata 360  
  
cacatatata tgtatatata cacatatgta taca 394

<210> 5  
<211> 832  
<212> DNA  
<213> Homo sapiens

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<222> (1)..(832)  
<223> MAR of human chromosome 1, genomic contig; 1452269 to 1453100

<400> 5  
tatattacta tatatacaat atacatatta ctatatatac catgtattac tatatatatc 60  
tactatatat attactatat atacaaaata tatattacta tatatacaat atacatatta 120  
ctatatatac catatattac tatatatatc tactatatat attactatat atacaaaata 180  
tatattacta tatatactat atattactgt atatacaata tatattacta tatatatact 240  
atatattact atatatacac tatatattac tatatataca caatatatat attactatat 300  
atacacaatg tatataacta tatatacaat atatattact atatatacta tatatattac 360  
tatacatact atatattact ctatatatac aatatatata ttacaatata tactacatat 420  
tactacatat actttatata ttactatata tactatatat tactgtatat acaatatata 480  
ttactaaata tacacaatat atattactat atatacacia tatatatatt actatatata 540  
cacattatat atgactatat atacacacta tatatattac tatatataca caatatataa 600  
ctatatatac acagtataca tattactata tatacacaat atatatatta ctatatatac 660  
actatatatt actatatata cacaatatat attactctat gtatacacta tatatattac 720  
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ctatatgtac tatatatatt actatatata ctatatatta ctatatatac ac 832

<210> 6  
<211> 350  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_binding  
<222> (1)..(350)  
<223> MAR of human chromosome 1, genomic contig; 831495 to 831844

<400> 6  
aatatataat atataaatat taatatgtat tatataatat atattaatat attatattat 60  
attactatat aaataatatt aatatattat attaaaatat taataaatat atcatattaa 120  
atattatatt aattaaatat taataaatat attatattaa tatatttata tattaaacct 180  
ataacatatg catatactta ttatatata acatgcatgt acttatttat atatacaata 240  
tatatttata tattatataa tatattatat gtattttatat attatatatc atatattata 300  
tgtatttata tattatatat catataatat atatatttat attatatata 350

<210> 7  
<211> 386  
<212> DNA  
<213> Homo sapiens

<220>  
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<222> (1)..(386)  
<223> MAR of human chromosome 1, genomic contig; 1447225 to 1447610

<400> 7  
acatttaatt taattatata ctgctatata taattaaatc tatatatcta tataacttat 60  
  
aatttatatt aatttaatta tatatactat atagttatat atacatatat gtaattatat 120  
  
atagtataat tatagtatat atgtatatat aatgtaagta aatatatagt atatatattat 180  
  
atatactata tatttataca tatgtcttta tatatactaa tatatataca catatgtaat 240  
  
atgtacatat ggcatatatt ttatagtgtg tatatacata tatgtaatat atatagtaat 300  
  
atgtaaatat atagtacata ttttaattata tggtaatatata tacacatatata tgtaatatgt 360  
  
gtattatagt acatatttta tagtat 386

<210> 8  
<211> 585  
<212> DNA  
<213> Homo sapiens

<220>  
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<222> (1)..(585)  
<223> MAR of human chromosome 1, genomic contig; 4955365 to 4955949

<400> 8  
atacacacat atacacatat gtacgtatat atactatata tacacacata tacacatatg 60  
  
tacgtatata tactatatat acacacatat acacatatgt acgtatatat actatatata 120  
  
cacacatata cacatatgta cgtatatata ctatatatac acacatatatac acatatgtac 180  
  
gtatatatac tatatatata cacatatata catatgtacg tatatattat atatacacac 240  
  
atatacacat atgtacgtat atatactata tatacacaca tatacacata tgtacgtata 300  
  
tatactatat atacacacat atacacatat gtacgtatat atactatata tacacacata 360  
  
tacacatatg tacgtatata tactatatat acacacatat acacatatgt acgtatatat 420  
  
actatatata cacacatata cacatatgta cgtatatata ctatatatac acacatatatac 480  
  
acatatgtac gtatatatac tatatatata cacatatata catatgtacg tatatatata 540

atatataccc atacacatac gtatatacgt acatatatat acgta 585

<210> 9  
<211> 772  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_binding  
<222> (1)..(772)  
<223> MAR of human chromosome 1, genomic contig; 5971862 to 5972633

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agtaaacata tatatagtaa atatatatag tgtatatata gtaaatatat atagtgcata 60  
tatatagtgat atatatatag tgtatatata gtaaatatat agtgtatata tatagtaaata 120  
atatatatgtg tatatatagt aatatatatat agtaaatatata tatatactat atatagtaaa 180  
tatatatata ctatatatatg taaatatata tatagtatat atatagtaaa tatatatata 240  
gtatatatat agtaaatatata tatatagtgat atatatatagta aatatatatata tagtatatat 300  
agtaaatatata tatagtatat atatagtaaa tatatatata gtatatatat agtaaatatata 360  
tatatagtgat atatatatagta aatatatatata tagtatatat atagtaaata tatatagtgat 420  
atatatatagta aatatatatata gtatatatat agtaaatatata tatagtatat atatagtaaa 480  
tatatatata ctgtatatatat atagtaaata tatatacact gtatatatat agtaaatatata 540  
tatatactgt atatatatag taaatatata tacactgtat atatatatagta aatatatatata 600  
cactgtatat acatagtaaa tatatatata ctgtatatatac atagtaaata tatatacact 660  
gtatatatac agtaaatatata tatatactgt atatacatag taaatatata tacagtgtat 720  
atacatagta aatatatatata cagtgtatat acatagtaaa tatatatata gt 772

<210> 10  
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<212> DNA  
<213> Homo sapiens

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<221> misc\_binding  
<222> (1)..(304)  
<223> MAR of human chromosome 1, genomic contig; 6221897 to 6222200

<400> 10  
atatataata tatataatta tattatatat aatatataat atatataatt atattatata 60



ttatatataa tatattatat attatatata taatatatat tatatatataa atatatatta	120
tatatataat atatatatta tattaaatat atattatata tataatatat attatatata	180
atatatataa tatatattat atatatatta tatattatat atatatatta tatatatata	240
atatatataa tatatattat atataatat tattatatat atataatat tataatatat	300
atta	304

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 <211> 311  
 <212> DNA  
 <213> Homo sapiens

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 <221> misc\_binding  
 <222> (1)..(311)  
 <223> MAR of human chromosome 1, genomic contig; 9418531 to 9418841

<400> 11	
tatatataat atttatatat aatattcatg tatttatata taaatattta tatatttata	60
tataaatatt tatatattta tatataaata tttatatatt tatatataat atttatacat	120
tatatataat atttatatat tatatataat atttatatat aatatttata tattatatat	180
aatatttata tatttatatg tataatatat attttatata tgtatgtata atatatattt	240
tatatatgta tgtataatat attttatata tgtatgtata atatattatt atatataata	300
tataatttat a	311

<210> 12  
 <211> 302  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_binding  
 <222> (1)..(302)  
 <223> MAR of human chromosome 1, genomic contig; 15088789 to 15089090

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atataatat tatattatat atataaatat atataaatat ataacatata tattatatat	60
aatatatat aatatataa catatatatt atatatataa atatatataa atatataaca	120
tatatattat atatataaat atatataaat atataacata tatattatat atataaatat	180
atattatata tttatatata taatatatat aaatatataa tatatattta tatatataat	240
atatataaat atataatat tatatttata tataatatat ataaatatat aatatataat	300

<210> 13  
<211> 461  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_binding  
<222> (1)..(461)  
<223> MAR of human chromosome 1, genomic contig; 6791827 to 6792287

<400> 13  
tatataatat atattatata tacacatata taatatatat tatatatata catatataat 60  
  
atatattata tatacacata tataatatat attatatata cacatatata atatattata 120  
  
tatatacaca tatataatat atattatata tacacatata taatatatat tatatatata 180  
  
catatataat atatattata tatacacata tataatatat attatatata cacatatata 240  
  
atatattata tatatacaca tatgtaatat atattatata cacacatata atatattata 300  
  
tatacacata tataatatat attatatata catatataat atatattata tatacacata 360  
  
tataatatat attatatata cacatatata atatattata tatatacaca tataatatat 420  
  
aatatataca catatataat atatattata tatatgcaca t 461

<210> 14  
<211> 572  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_binding  
<222> (1)..(572)  
<223> MAR of human chromosome 1, genomic contig; 163530 to 164101

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atattataat tatatatatt atatataatt atataaaata tatattataa ttatatatat 60  
  
tttatataat atatattata taattaatat attatatata atatatatat tatatataat 120  
  
atatattata tatatattat atataatata tataatatat ataatatata atataatata 180  
  
tatattatat ataatatata atatatatata tatattataa tataatatat ataatatata 240  
  
atataatata tataatatat aatataatat ataatatata atatatatata tatataatat 300  
  
aatatataat atatataata tataatatata tatataatat atataatata ttataatata 360

atatatataa tatataatat aatatatata atatataata taatatataa tatataatat	420
atatttaata tttttattaa ttatttggtta tatattttatt aatatataat atataaatata	480
tttaatatat tataactata tatttatatta taattatata tattatatat atacaattat	540
aattatatat tatatatact tataatatat at	572

<210> 15  
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 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_binding  
 <222> (1)..(357)  
 <223> MAR of human chromosome 1, genomic contig; 1842332 to 1842688

<400> 15	
tatatctata tatatctata tatatataat atagataata tctatatata taatatagat	60
aattattatct atatataata tagataatat tatctatata taatatagat aattattatct	120
atatataaaa ttatattata tctatatata ttatatatat aaaattatat tatatctata	180
tataatatag ataatatcta tatataaata gataatatct atatatataa tatagatatt	240
atctatatta tagatataga taattattatc tatattatag atattatcta tatataatat	300
agataatat attctatatta tatatataat atatctatat tatctataat attatct	357

<210> 16  
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 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_binding  
 <222> (1)..(399)  
 <223> MAR of human chromosome 1, genomic contig; 2309560 to 2309958

<400> 16	
attatatata atatatatta tatattatat atatcaagca gcagatataa tatataatat	60
atataaatata tataatatat attgtatatt atataaatata taatatatat aatatatatt	120
gtatattata taatatataa tatatataat atatattgta tattatataa tatataatat	180
atataaatata tattgtatat tatataatat ataatatatg taatatatta tgtaatatat	240
tatataatat atattatata ttatatataa tatatattat atataaatata tattacataa	300
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cgtaatatat gtaatatatt acatataata tatacat

399

<210> 17

<211> 394

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_binding

<222> (1)..(394)

<223> MAR of human chromosome 1, genomic contig; 2231759 to 2232152

<400> 17

atatatactt ataaattata tacttatata tacttataaa ttatatactt atatatactt 60

ataaattata tacttatata tacttataaa ttatatactt atatatactt ataaattata 120

tacttatata tacttataaa ttatatactt atatatactt ataaattata tacttatata 180

tacttataaa ttatatactt atatataatt ataaattata tacttatata taattataaa 240

ttatatactt atatataatt ataaattata tacttatata taattataaa ttatatactt 300

atatataatt ataaattata tacatatata taattataaa ttatatacat atataattat 360

aaattatata catatataat tataaattat atac 394

<210> 18

<211> 387

<212> DNA

<213> Homo sapiens

<220>

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<222> (1)..(387)

<223> MAR of human chromosome 1, genomic contig; 7406524 to 7406910

<400> 18

tatattatat ataatatata ttatatataa tataaataat atatattata tataatatat 60

aaataatata taatatataa ataatatata atatataata tataaataat atataatata 120

taacatatata ataatatata taatatataa ataatatata taatatataa ataatatata 180

taatatataa aaatatataa tatataatac atatataaat aatatattat attatatatg 240

atacataata tattatatat aatatattat atgatacata atatattata tagaatatat 300

tatatgatac ataatatatt atatagaata tattatatga tacataatat attatatgat 360

acataatata ttatatataa tatatta 387

<210> 19  
<211> 370  
<212> DNA  
<213> Homo sapiens

<220>  
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<222> (1)..(370)  
<223> MAR of human chromosome 1, genomic contig; 9399572 to 9399941

<400> 19  
catatatata tatatacaca tatatacaca tatatatata catacatatg tacacatata 60  
  
tatacacata tgtatacaca tatatacaca tatatacaca catatatata catatatata 120  
  
cacatatata cacatatata cacatatata cacatatata catatatata catatatata 180  
  
tatatacaca tatatataat atacacacat atatatacac atatatacac acatatatac 240  
  
acatatatac acatatatat acacatatat acacatatat acatatatac acatatatat 300  
  
acatatatac acatatatac atatatacac atatatacat atatacacac atatatacac 360  
  
atacatatac 370

<210> 20  
<211> 377  
<212> DNA  
<213> Homo sapiens

<220>  
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<222> (1)..(377)  
<223> MAR of human chromosome 1, genomic contig; 12417411 to 12417787

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attatatata atacatatata ttatatattt atatataaat tataataaat acatataatt 60  
  
atatatttat atataaatta tatataataa atacatatata ttacatatat ttataaatta 120  
  
taataaatac atataattac atatatttat atatgaatta tatataataa atacatatata 180  
  
ttatatatat ttatatgtag attatatata aatatatata atttatatat ataataatat 240  
  
atataattta tatatataat tatatatata ataaatatat ataatttata tatataatta 300  
  
tatatataat aaatatataa taatatatat aatttatata tataattata tatataataa 360  
  
atatatatataa tttatat 377

<210> 21  
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<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_binding  
<222> (1)..(1524)  
<223> MAR of human chromosome 1, genomic contig; 1643307 to 1644830

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tataaatata tataaatata taaatatata taaatatata aatatatata aatatatata 60  
  
aatatataaaa aatatataaaa tatatatataaaa tatatatataaaa tatataaaaaa cataaaaaata 120  
  
tatataaata tatataaata tataaaaaata tataaatata taaatatata aaaatatata 180  
  
aatatataaaa tatatacata aatatatata aatatatata aatatataaaa aatatatata 240  
  
aatatataaaa tatatatataaaa tatatatataaaa tatatatataaaa tatataaaaaa tatatatataaaa 300  
  
tatataaata tataaaaaata tatataaata tataaatata taaatatata taaatatata 360  
  
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